



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,730	10/05/2006	Uwe Befurt	05-834	4321
20306	7590	06/21/2010		
MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP			EXAMINER	
300 S. WACKER DRIVE			LEONG, NATHAN T	
32ND FLOOR				
CHICAGO, IL 60606			ART UNIT	PAPER NUMBER
			1715	
			MAIL DATE	DELIVERY MODE
			06/21/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/551,730

Applicant(s)

BEFURT ET AL.

Examiner

NATHAN T. LEONG

Art Unit

1715

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2010.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 11-18 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SI/100)
Paper No(s)/Mail Date 2/13/2006 and 10/3/2005
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Election Acknowledged

Applicant's election of invention II, drawn to claims 11-18, without traverse is hereby acknowledged. The restriction is therefore deemed as proper and made FINAL. Claims 1-10 are withdrawn while claim 19 has been cancelled in a claim amendment filed 10/3/2005.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 15 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 15 and 17 both contain the word "preferably", which renders the claim indefinite. It is unclear whether or not the claim requires the limitations after "preferably" (i.e. 30-38°C and slits being in a row, respectively). For examination purposes, these limitations are interpreted as not required by the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 11, 12, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Röckel et al DE 10113227 A1 in view of Scott et al US 6465047, further in view of Parker US 5202381.

Per claim 11, Röckel teaches forming a paint dispersion comprising the composition including 10-60% by wt of solid constituents, 10-60% by wt of a pigment, 20-70% of filling material [0040], 0.1 to 0.6% by wt of a dispersant [0045], and 0.1 to 3% by wt of a thickener [0047]. Röckel does not explicitly teach exactly the claimed ranges, but the ranges of the components of Röckel overlap the claimed ranges. It would be obvious to one skilled in the art at the time of the invention to choose the exact and best weight percentage among a known and preferred weight percentage of components to form a dispersant paint (see MPEP 2144.05.A). Röckel does not teach the claimed filler particle diameter size, but Röckel does teach the importance of a small particle size of fillers (calcium carbonate or kaolin, two of Applicant's preferred fillers) [0044], and therefore, filler particle size is considered a result-effective variable. It would be obvious

to one skilled in the art to optimize the particle size of the filling material to yield the best results via routine experimentation (see MPEP 2144.05).

Röckel is silent regarding the claimed viscosity and airless spraying the composition. However, Scott teaches a similar process of forming a paint dispersion comprising a solid polymer, pigments, fillers, and other additives, and airlessly spraying the composition onto the desired substrate (see abstract). It would be obvious to apply the airless spraying method taught by Scott with the composition of Röckel because Scott teaches that such a deposition method can be used effectively with a paint dispersion onto similar substrates taught by Röckel (see Röckel [0050]). Scott teaches pumping the paint from a reservoir, until it reaches the nozzle where it is airlessly sprayed (col. 2, lines 24-35). Scott teaches a discharge pressure that overlaps with the claimed range (1 bar = 14.5 psi; col. 2, lines 28-29). It would be obvious to one skilled in the art to select a discharge pressure among a known effective range to yield the desired results (see MPEP 2144.05.A).

Röckel is silent regarding the claimed viscosity measured at the claimed specifications. However, the dispersion of Röckel is expected to be the same as the claimed viscosity, since Röckel teaches the same composition as claimed, using many of the same specific components (i.e. kaoline for filler, urethane thickeners, titanium dioxide pigment, etc). Scott furthermore teaches the importance of optimizing the viscosity in a paint dispersion and therefore, viscosity is deemed as a result-effective variable (see col. 3, lines 15-35). Furthermore, Röckel teaches that the viscosity of the composition can be adjusted for spray application [0050]. It would be obvious to one

skilled in the art at the time of the invention to have optimized the viscosity to yield the desired results via routine experimentation (see MPEP 2144.05).

Röckel and Scott are silent as to how the viscosity is determined. However, Parker teaches a process of forming polymer blends and measuring their viscosity over various shear rates using a capillary rheometer (col. 8, lines 35-47). Parker teaches measuring at various viscosities (see Table 1) so as to get a better understanding of the properties of the composition (viscosity) by altering variables which directly impact the viscosity. It would be obvious to one skilled in the art to use a capillary rheometer, and choose a desired shear rate at which to measure viscosity, because Parker shows that such a method is well known and used in the art to measure polymer dispersions.

Per claim 12, Scott teaches a discharge pressure range that overlaps with the claimed range(col. 2, lines 28-29). It would be obvious to one skilled in the art to select a discharge pressure among a known effective range to yield the desired results (see MPEP 2144.05.A).

Per claim 15, Scott teaches the claimed temperature range for use in an airless spray system (col. 3, lines 25-30). It would be obvious to one skilled in the art to select a temperature among a known effective range to yield the desired results (see MPEP 2144.05.A).

6. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Röckel et al DE 10113227 A1 in view of Scott et al US 6465047, further in view of Parker US 5202381, as applied above, further in view of Earl US 6655606.

Röckel, Scott, and Parker are silent regarding the specifics of the airless spray apparatus. Earl teaches an airless paint sprayer assembly. It would be obvious to employ the assembly as taught by Earl to use as the sprayer to airlessly spray the composition of Röckel because Earl teaches that such an assembly is typical and conventional in the art of spraying (paints) (see col. 1, lines 5-25); Per claim 13, Earl teaches a typical airless paint sprayer to include a pump (diaphragm pump, col. 1, lines 20-25). Per claim 16, Earl teaches the assembly comprising multiple (i.e. double) nozzles (see abstract).

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Röckel et al DE 10113227 A1 in view of Scott et al US 6465047, further in view of Parker US 5202381, as applied above, further in view of Czerwonka US 2002/0129767.

Röckel, Scott, and Parker are silent regarding having a temperature controlled hose as the connecting line. However, Czerwonka teaches a system for airless spraying [0006] in which the hose connecting the storage tank to the nozzle has a temperature controlling functionality (see abstract, [0008]). It would have been obvious to one skilled in the art to modify the process taught by Röckel, with a temperature controlling hose because Czerwonka teaches the benefits of maintaining temperature

through the assembly [0008], and Scott also teaches the importance of maintaining a certain temperature so as to keep the desired liquid viscosity (col. 3, lines 15-35).

8. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Röckel et al DE 10113227 A1 in view of Scott et al US 6465047, further in view of Parker US 5202381, further in view of Earl US 6655606, as applied above, further in view of Kuhn et al US 4842203.

Röckel, Scott, Parker, and Earl teach the above process, including using multiple nozzles. Röckel, Scott, Parker, and Earl are silent regarding the nozzles being slits. Per claims 17-18, Kuhn teaches a nozzle airless spray assembly including a nozzle with a slit shaped orifice (see Fig. 2-3 and col. 7, lines 55-60). It would be obvious to apply such a slit shaped nozzle to the process and assembly taught by Röckel in view of Earl because Kuhn teaches such a nozzle to be effective as an airless sprayer (col. 7, lines 50-60). The slits of Kuhn would form a fan spray pattern (see Fig. 1). Scott teaches that it is desirable for the fan shapes of the spray to "overlap" (see col. 2, lines 35-45) and therefore, it would be obvious to modify the apparatus of Kuhn so that the fan shapes of the spray overlap.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN T. LEONG whose telephone number is

(571)270-5352. The examiner can normally be reached on Monday to Friday, 9:00am to 6:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571)272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NATHAN T LEONG/
Examiner, Art Unit 1715

/Timothy H Meeks/
Supervisory Patent Examiner, Art Unit 1715